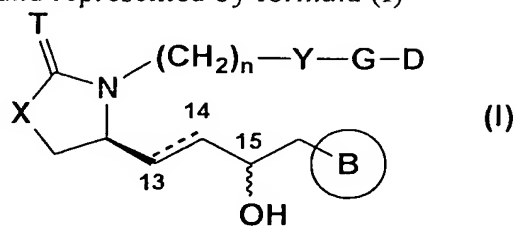


# CLAIMS

1. A compound represented by formula (I)



wherein is a single bond or double bond,

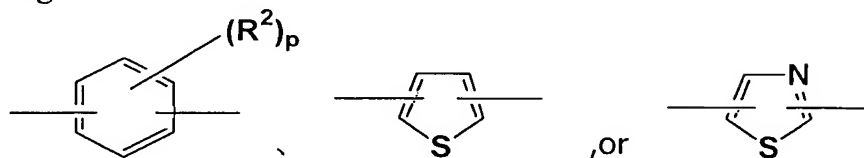
is  $\alpha$ -configuration,  $\beta$ -configuration or a voluntary mixture of  $\alpha$ -configuration and  $\beta$ -configuration,

D is  $-\text{COOR}^1$  or tetrazoryl,

$\text{R}^1$  is hydrogen or C1-4 alkyl,

G is ringA or C1-4 alkylene,

ringA is



$\text{R}^2$  is a halogen atom, C1-4 alkyl or C1-4 alkoxy,

p is 0 or an integer of 1-4,

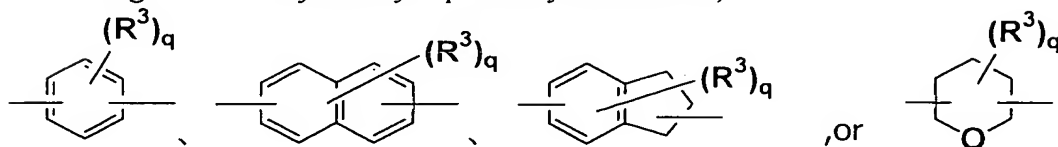
when p is 2 or more, plural  $\text{R}^2$ 's are the same or different,

Y is a single bond or  $-\text{S}-$ ,

T is oxygen or sulfur,

X is  $-\text{CH}_2-$ ,  $-\text{O}-$  or  $-\text{S}-$ ,

ringB is C3-7 cycloalkyl optionally substituted,



wherein  $\text{R}^3$  is (1) a halogen atom, (2) C1-4 alkyl optionally substituted with 1-5 of halogen atom(s), (3) C1-4 alkoxy optionally substituted with 1-5 of halogen atom(s), (4) C1-4 alkyl substituted with C1-4 alkoxy, (5) phenyl or (6) 3- to 15-membered mono-, bi- or tri-heterocyclic aryl containing 1 to 4 hetero atom(s) selected from oxygen, nitrogen and sulfur atom(s) which may be partially or fully saturated, and (5) phenyl or (6) heterocyclic aryl in  $\text{R}^3$  is optionally substituted with 1-3 of (a) halogen atom(s), (b) C1-4 alkyl, (c) C1-4 alkoxy and/or (d) nitro,

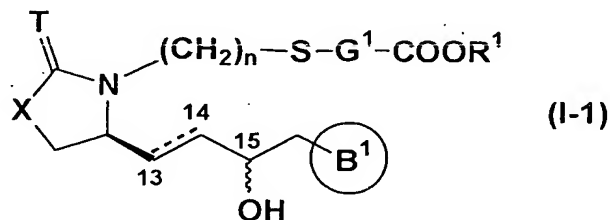
q is 0 or an integer of 1-5,  
when q is 2 or more, plural R<sup>3</sup>'s are the same or different,  
n is an integer of 1-4,  
a salt thereof, a solvate thereof, a cyclodextrin clathrate thereof, or a prodrug thereof.

2. The compound according to claim 1, which is selected from the group consisting of:

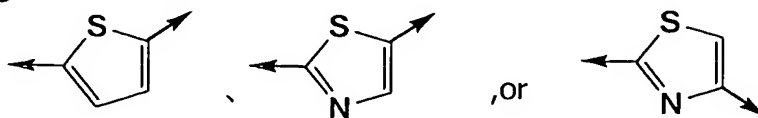
- (1) 4-[(2-((4S)-4-[(1E,3S)-4-(3-ethylphenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (2) 4-[(2-((4S)-4-[(1E,3S)-3-hydroxy-4-phenylbut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (3) 4-{[2-((4S)-4-[(1E,3S)-4-[4-fluoro-3-(trifluoromethyl)phenyl]-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (4) 4-[(2-((4S)-4-[(1E,3S)-4-(3,5-difluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (5) 4-[(2-((4S)-4-[(1E,3S)-3-hydroxy-4-(3-propylphenyl)but-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (6) 4-[(2-((4S)-4-[(1E,3S)-4-(3-ethyl-4-fluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (7) 4-[(2-((4S)-4-[(1E,3S)-4-(3,4-difluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (8) 4-{[2-((4S)-4-[(1E,3S)-3-hydroxy-4-[3-(trifluoromethyl)phenyl]but-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (9) 4-[2-((4S)-4-[(1E,3S)-4-(4-fluoro-3-methylphenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (10) 4-[(2-((4S)-4-[(1E,3S)-4-(3-fluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (11) 4-[(2-((4S)-4-[(1E,3S)-4-(3-chloro-4-fluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (12) 4-{[2-((4S)-4-[(1E,3S)-3-hydroxy-4-[3-(methoxymethyl)phenyl]but-1-enyl]-2-oxo-1,3-thiazolidine-3-yl)ethyl)sulfanyl]butanoic acid,
- (13) 7-{(2R)-2-[(1E,3S)-4-(4-fluorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- (14) 7-{(2R)-2-[(1E,3S)-4-(3,5-difluorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,

- (15) 7-((2R)-2-((1E,3S)-4-[4-fluoro-3-(trifluoromethyl)phenyl]-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (16) 7-((2R)-2-((1E,3S)-4-(4-fluoro-3-methylphenyl)-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (17) 7-((2R)-2-((1E,3S)-4-(3-ethyl-4-fluorophenyl)-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (18) 7-((2R)-2-((1E,3S)-3-hydroxy-4-[3-(trifluoromethyl)phenyl]but-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (19) 7-((2R)-2-((1E,3S)-4-(3-fluorophenyl)-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (20) 7-((2R)-2-((1E,3S)-3-hydroxy-4-phenylbut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (21) 7-((2R)-2-((1E,3S)-4-(3,4-difluorophenyl)-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (22) 7-((2R)-2-((1E,3S)-4-(3-chloro-4-fluorophenyl)-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (23) 7-((2R)-2-((1E,3S)-4-(3-ethylphenyl)-3-hydroxybut-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid,  
 (24) 7-((2R)-2-((1E,3S)-3-hydroxy-4-(3-propylphenyl)but-1-enyl)-5-thioxopyrrolidine-1-yl)heptanoic acid.

3. The compound according to claim 1, which is represented by formula (I-1):

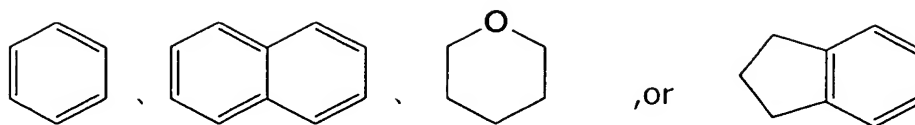


wherein  $G^1$  is ring  $A^1$  or C1-4 alkylene,  
 ring  $A^1$  is



wherein left-pointing arrow represents binding to S, and right-pointing arrow represents binding to  $COOR^1$ ,

ring  $B^1$  is C3-7 cycloalkyl,



ringB<sup>1</sup> may be substituted with a halogen atom, C1-4 alkyl, phenyl, methoxymethyl, trifluoromethyl and/or trifluoromethoxy, other symbols have the same meanings as described in claim 1, and wherein when T is oxygen, X is -CH<sub>2</sub>-, and when n is an integer of 2-4, G<sup>1</sup> is ringA<sup>1</sup>.

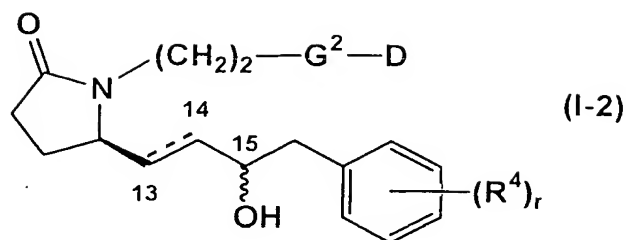
4. The compound according to claim 3, which is selected from the group consisting of:

- (1) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-phenylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (2) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-ethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (3) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-chloro-4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (4) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (5) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (6) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-phenylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (7) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-methylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (8) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3,5-difluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (9) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (10) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-trifluoromethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (11) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (12) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3,4-difluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,

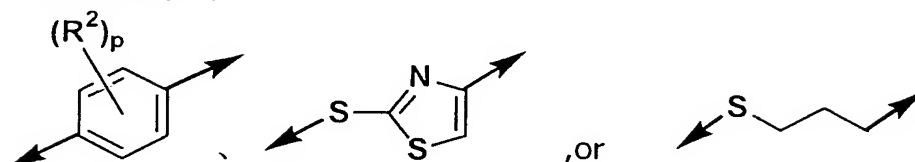
- (13) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-phenyl-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (14) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-propylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (15) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-methoxymethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (16) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-ethyl-4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (17) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-phenyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (18) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-methylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (19) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (20) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (21) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-phenylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (22) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-phenylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (23) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (24) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-phenylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (25) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-ethylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (26) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-methylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (27) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (28) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-phenylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (29) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-ethylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (30) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,

- (31) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (32) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-chloro-4-fluorophenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (33) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-cyclopropyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (34) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-cyclohexyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (35) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-5-(5-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (36) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-cyclobutyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (37) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-chlorophenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (38) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-cycloheptyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (39) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(indane-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (40) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(tetrahydropyran-4-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (41) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(7-methylnaphthalene-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (42) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-17,18,19,20-tetranol-5,10-dithia-8-azaprost-13-enoic acid,
- (43) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-17,18,19,20-tetranol-6-thia-8-azaprost-13-enoic acid,
- (44) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-methylphenyl)-17,18,19,20-tetranol-6-thia-8-azaprost-13-enoic acid, and
- (45) (15 $\alpha$ ,13E)-9-thioxo-15-hydroxy-16-(4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid.

5. The compound according to claim 1, which is represented by formula (I-2):



wherein  $G^2$  is



wherein left-pointing arrow represents binding to  $-(CH_2)_2-$ , and right-pointing arrow represents binding to D,

$R^4$  is (1) a halogen atom, (2) C1-4 alkyl (3) C1-4 alkoxy, (4) C1-4 alkyl optionally substituted with 1-5 of halogen atom(s), (5) C1-4 alkoxy optionally substituted with 1-5 of halogen atom(s), (6) phenyl or (7) 3- to 15- membered mono-, bi- or tri-heterocyclic aryl containing 1 to 4 hetero atom(s) selected from oxygen, nitrogen and sulfur atom(s) which may be partially or fully saturated, and (6) phenyl or (7) heterocyclic in the  $R^4$  may be substituted with 1-3 of (a) a halogen atom(s), (b) C1-4 alkyl (c) C1-4 alkoxy and/or (d) nitro,

$r$  is an integer 1 to 5, and

other symbols have the same meanings as described in claim 1.

6. The compound according to claim 5, which is selected from the group consisting of:

- (1) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3,5-dimethylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (2) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(benzothiazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (3) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (4) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(5-methylbenzothiazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (5) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(5-methylbenzoxazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (6) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(6-methylbenzoxazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,

- (7) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(6-methylbenzoxazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (8) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(4-methylbenzothiazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (9) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(4-methylbenzothiazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (10) (15 $\alpha$ ,13E)-1,6-(2-fuloro-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (11) (15 $\alpha$ ,13E)-1,6-(3-methyl-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (12) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(5,7-dimethylbenzoxazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (13) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(5-chlorobenzothiazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (14) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(5-chlorobenzothiazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (15) (15 $\alpha$ )-9-oxo-15-hydroxy-16-(3-(2,4-dimethylphenyl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (16) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(3,4-dimethylphenyl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (17) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3,4-difulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (18) (15 $\alpha$ ,13E)-1,6-(2-methyl-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (19) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(5-chlorobenzoxazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (20) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methyl-4-fulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (21) (15 $\alpha$ ,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-chloro-4-fulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (22) (15 $\alpha$ ,13E)-1,6-(3-methoxy-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (23) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid,
- (24) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3,5-difulorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid,



- (25) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(phenyl)phenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid,  
(26) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-(4-fluorophenyl)phenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid, and  
(27) (15 $\alpha$ ,13E)-9-oxo-15-hydroxy-16-(3-phenyl-4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid.

7. A pharmaceutical composition comprising the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof, a cyclodextrin clathrate thereof, or a prodrug thereof.

8. An EP4 agonist comprising the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof or a cyclodextrin clathrate thereof, or a prodrug thereof.

9. A method for preventing and/or treating EP4-mediated disease, which comprises administering to a mammal an effective amount of the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof or a cyclodextrin clathrate thereof, or a prodrug thereof.

10. Use of the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof, a cyclodextrin clathrate thereof, or a prodrug thereof for the manufacture of an EP4 agonist.